CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.10/HVMK/CSR-04/006d/CEMENT/2016-17 Date: 09.04.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, Vidyaranyapura Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. H.V. Madan Kumar,** #113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.
*NAME OF THE WORK	:	Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.
*REFERENCE	:	EE/BTP/BBMP/E-PMT/247/2015-16 Dated: 26.02.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	07.04.2016
PERIOD OF TESTING	:	07.04.2016 to 09.04.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	135 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	480 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.10/HVMK/CSR-04/006d/SAND-Gradation/2016-17 : 09.04.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. H.V. Madan Kumar,**
#113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.

*** Name of Work** : Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/247/2015-16 Dated: 26.02.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 07.04.2016

Date of Testing : 09.04.2016

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.50	90-100	90-100	90-100	95-100
2.36	77.60	60-95	75-100	85-100	95-100
1.18	54.70	30-70	55-90	75-100	90-100
600 Micron	24.90	15-34	35-59	60-79	80-100
300 Micron	11.40	5-20	8-30	12-40	15-50
150 Micron	5.60	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.10/HVMK/CSR-04/006d/AGG/GR/2016-17 : 09.04.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. H.V. Madan Kumar,**
#113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.

*** Name of Work** : Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/247/2015-16 Dated: 26.02.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 07.04.2016

Date of Testing : 09.04.2016

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.50	95-100	85-100
20	45.00	30-70	0-20
10	19.95	10-35	0-5
4.75	4.10	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Sadhu
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Job No.: CTCE/BBMP/W.No.10/HVMK/CSR-04/006d/CUBE/2016-17 13.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. H.V. Madan Kumar,**
#113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.

*** Name of the work** : Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.

*** Reference** : EE/BTP/BBMP/E-PMT/247/2015-16 Dated: 26.02.2016

*** Sample ID** : Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 13.05.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.04.2016	13.05.2016	8.112	475.6	21.14
2	15.04.2016	13.05.2016	8.259	493.6	21.94
3	15.04.2016	13.05.2016	8.326	512.2	22.76

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Building & Highway Material Testing Laboratory

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T-2377

Job No.: CTCE/BBMP/W.No.10/HVMK/CSR-04/006d/CUBE/2016-17 13.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
*** Agency**	: **Mr. H.V. Madan Kumar,** #113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.
*** Name of the work**	: Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.
*** Reference**	: EE/BTP/BBMP/E-PMT/247/2015-16 Dated: 26.02.2016
*** Sample ID**	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
*** Grade of Concrete**	: M_{20}
Compressive Strength as on	: 28th day
Sample Received on	: 13.05.2016

AE-10

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.04.2016	13.05.2016	8.182	482.3	21.44
2	15.04.2016	13.05.2016	8.290	512.2	22.76
3	15.04.2016	13.05.2016	8.315	526.3	23.39

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Job No.: CTCE/BBMP/W.No.10/HVMK/CSR-04/006d/CUBE/2016-17 13.05.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
*** Agency**	: **Mr. H.V. Madan Kumar,** #113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.
*** Name of the work**	: Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.
*** Reference**	: EE/BTP/BBMP/E-PMT/247/2015-16 Dated: 26.02.2016
*** Sample ID**	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
*** Grade of Concrete**	: M_{20}
Compressive Strength as on	: 28th day
Sample Received on	: 13.05.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.04.2016	13.05.2016	8.265	485.9	21.60
2	15.04.2016	13.05.2016	8.356	510.2	22.68
3	15.04.2016	13.05.2016	8.418	530.1	23.56

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
*** Agency**	: **Mr. H.V. Madan Kumar,** #113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.
*** Name of the work**	: Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.
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Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
*** Grade of Concrete**	: M_{20}
Compressive Strength as on	: 28th day
Sample Received on	: 13.05.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	15.04.2016	13.05.2016	8.110	476.6	21.18
2	15.04.2016	13.05.2016	8.280	513.9	22.84
3	15.04.2016	13.05.2016	8.320	520.2	23.12

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Job No.: CTCE/BBMP/W.No.10/HVMK/STEEL/2016-17 09.04.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer**, Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Mr. H.V. Madan Kumar,** #113/A, 80feet road, Aswathnagara, RMV 2nd Stage, Bangalore – 94.

Name of the Work : Construction of RCC drain at Kamath layout in Ward No.10 (Doddabommasandra), Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/247/2016-17 Dated: 26.02.2016

Date of Test : 09.04.2016

Technical Reference : IS: 1786-2008

AE-10

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.20	O.K	O.K

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